A SURVEY OF THE PEACH INDUSTRY IN OTTAWA COUNTY

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and

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Summary and Conclusions

During July and August of 1952, 149 Ottawa County peach growers were interviewed in order to obtain information concerning tree numbers, ages, and varieties, marketing and production practices, and factors affecting these practices.

Elberta, Golden Jubilee and Halehaven were the three most important of the 58 varieties grown in Ottawa County. Elberta was being grown by 95 percent of the growers and made up more than one-half of the total number of trees.

The 149 growers had a total of 231,520 trees. About one-half of the growers had 1000 or fewer trees each and together had only 16 percent of the total number.

Forty-nine growers intended to increase their peach acreage within the next five years while 23 growers intended to reduce their acreage. The intended change in tree numbers will be an increase of more than 20,000 trees. It was indicated that the Elberta variety might become less important in the future and that Halehaven, Redhaven, South Haven, and other early varieties would become more important.

About 31 percent of the growers had fewer peach trees at the time of the survey than at the time they began operating the farm and about 46 percent had more trees. About 85 percent of those growers having fewer trees have used the land formerly in peaches either for grain crops. general farming, or have left it remain idle.

One hundred thirty growers were full owners of their farms, 12 were non-owners, and seven were part owners. One-half of the growers had owned or operated the farm for 15 years or less.

Approximately one-half of the growers were more than 56 years of age. One-fourth of the peach growers had made definite plans for transfer of ownership of their farm and almost two-thirds indicated that the farm would remain in the family if possible.

Nearly 54 percent of the growers had jobs other than farming. Twenty-seven percent earned more than one-half of their total income from peaches, compared with about 41 percent before World War II.

A roadside market was used by 73 percent of the growers to market part or all of their 1951 peach crop, and 37.2 percent sold to truckers and 26.4 percent marketed through a local packing shed.

Roadside market operators based their selling price mostly upon local competition, market reports, or newspapers.

All but seven growers were using only wooden splint or stave containers to market their peaches and the bushel and four quart sizes were most popular. Thirty-two of these growers believed that another type of container would be more satisfactory and most of them indicated that a paper or cardboard type would be better.

Sixty percent of the growers believed that a major marketing problem existed in the county, and the most important problems mentioned were: price cutting by other growers, truckers take advantage when ripe fruit is on hand, and cannot obtain fair prices.

The growers indicated that spring frost damage was not a problem in Ottawa County.

The most common planting distances used in peach orchards were 16 x 16 and 18 x 18 feet. The average planting distance for all growers was 17.3 x 17.8 feet.

Seven growers were irrigating peach trees, and all but one believed that it was of value. More than one-half of those not irrigating indicated a belief that it would be of value in most years.

Seventy-seven growers were using cover crops in their orchards and rye, rye-grass or both were used as a cover crop by 85 percent of them.

Two-thirds of the growers followed a fertilization schedule in their orchards, 70 percent of those having more than 1000 trees, and 62 percent of those with 1000 or less trees.

One hundred and two growers mentioned major problems in the production of peaches. Insect control was mentioned by 72.5 percent of the growers as being a

major problem, and peach borers made up 43 percent of this total. Disease control and the scarcity and high cost of labor were the next most important problems mentioned.

Fifty-six percent of the growers were in favor of grower financed advertising of Ottawa County peaches, 23 percent were opposed, and the rest were uncertain.

Introduction

Ottawa County has long been the leading peach producing area in Ohio and in 1949 more than 20 percent of the total crop in Ohio was produced in this county. Since 1910, however, peach tree numbers in Ohio and Ottawa County have been rapidly declining.

Fruit has decreased in importance as a source of farm cash income. In 1937 fruit was the second greatest source of gross cash income to farmers in Ottawa County and accounted for 19 percent of total gross farm receipts. In 1951 fruit made up only 10 percent of total gross cash income to Ottawa County farmers and ranked third as a source of farm income.

Table 1 shows the decline in peach tree numbers in Ottawa County by census years. Tree numbers declined between each census year, and from 1910 until 1950

Table 1. Peach Tree Numbers and Production and Percent of State Total, by Census Year, Ottawa County, 1910-1950.

Census Year	Total Peach Trees		Production[1/]		Percent change in tree numbers from previous census
	Number	Percent of State Total	Bushels	Percent of State Total	
1910	731,917	14.0	275,497	26.6	--
1915	2/	2/	2/	2/	2/
1920	615,150	15.8	70,313	11.4	-16.0
1925	538,663	14.7	5,003	0.7	-12.4
1930	499,099	13.1	3,991	0.8	- 7.3
1935	388,263	11.7	66,992	32.6	- 7.8
1940	326,716	17.8	241,129	24.7	- 8.4
1945	301,402	17.0	170,844	12.5	- 7.7
1950	270,837	18.2	199,904	21.7	-10.1

1/ Production for year prior to census year.
2/ No census data available.

the number of peach trees in Ottawa County declined 63 percent. Peach trees numbers in the state as a whole declined by 71.5 percent during this same period.

At a meeting of the Ottawa County Fruit Committee in July 1952 it was decided that a survey of the peach industry in the county might be helpful in determining the status of the peach business and in indicating future trends. The results of the survey could then be used by growers, research and extension workers in appraising the peach industry, and in solving marketing and production problems.

Method

The grower survey was conducted in Ottawa County during July and August of 1952. Each fruit grower was personally contacted during this period and asked several questions. These questions were designed to obtain information on tree numbers and varieties at the present time and in the future, marketing practices and factors affecting marketing practices, and production practices. The enumerators used a list prepared by the County Agent and also stopped wherever fruit of any kind was being grown. One hundred seventy seven farm operators were visited during this survey of which 149 were peach growers who currently had 100 or more bearing trees. An attempt was made to contact all peach growers in Ottawa County had approximately one or more acres of trees. The 149 growers who were visited represented 231,520 peach trees, or about 85 percent of the total number of trees in the county according to the 1950 Census of Agriculture. The 149 peach growers having 100 or more trees will be the growers with which this report is concerned.

Number of Growers and Type of Production

One hundred and seventy seven fruit growers were visited during July and August of 1952. Table 2 presents the classification of these growers with regard to peaches. Only those growers having 100 or more peach trees were asked to answer all the questions since it was believed that smaller growers could not be considered commercial growers.

Table 2. Classification of 177 Ottawa County Fruit Growers, July and August, 1953

Classification as Peach Grower	Number of Growers	Percent of Growers
One hundred or more trees	149	84.2
Less than one hundred trees	5	2.8
No peach trees	23	13.0
Total	177	100.0

Of the 23 growers who did not have peaches at the time they were interviewed, 22 of them asserted that peaches had been grown on that farm at one time. When asked why peaches were no longer grown on the farm, the most common answers were that peaches did not return a satisfactory profit or involved difficult production problems.

Table 3 indicates the kind of fruit grown, other than peaches, by the 149 peach growers contacted. This table shows that only about one-half of these peach growers had one or more acres of other fruits. Apples were grown by 51 of those peach growers who had other fruit in addition to peaches.

Tree Numbers, Varieties, and Ages

It was not possible to obtain the exact number of trees for each variety because many growers could only give the total number of trees in their orchards. Table 4 shows the number of trees for the most important varieties based upon the information given by those growers who knew the number of trees of each variety that they were growing. The information in Table 4 indicates the relative importance of the several varieties in terms of tree numbers even though the variety of many trees was not reported.

It is interesting to note that the Elberta variety made up more than one-half of all peach trees accounted for in this survey. The Halehaven and Golden Jubilee varieties were the next most important in terms of tree numbers by a considerable margin.

Table 3. Number and Percent of Peach Growers[1] Growing Other Fruit in Addition to Peaches, 149 Peach Growers, Ottawa County, July-August, 1952.

Fruit Grown in Addition to Peaches[2]	Number of Growers	Percent of Growers
No other fruit	73	49.0
Apples only	32	21.5
Grapes only	4	2.7
Pears only	3	2.0
Plums only	3	2.0
Cherries only	2	1.3
Apples and pears	11	7.4
Pears and plums	5	3.4
Apples, pears and plums	4	2.7
Apples and cherries	2	1.3
Apples and plums	2	1.3
Other[3]	8	5.4
Total	149	100.0

1/ Includes only those having 100 or more peach trees.

2/ Includes only those having approximately one acre of each fruit other than peaches.

3/ Includes other combinations of the given fruits in addition to one grower who had apricots and nectarines.

Table 4. Number of Peach Trees by Variety, Ottawa County, July and August, 1952

Variety	Number of Growers Reporting	Number of Trees
Elberta	128	126,267
Halehaven	85	18,71[illegible]
Golden Jubilee	86	10,589
South Haven	52	5,764
Fertile Hale	18	3,435
Zarn	20	3,168
Red Haven	34	2,805
J. H. Hale	14	1,730
Hardie	14	1,595
Rochester	21	1,055
Rio Oso Gem	8	1,017
Salberta	11	965
Other and mixed[1/]	73	54,418
Total	149[2/]	231,520

1/ Includes varieties of which there were less than 900 trees and combinations of which growers could not give the number of each variety.

2/ Most growers had more than one variety.

The importance of the varieties grown in terms of the number of growers having at least ten trees of the given varieties is presented in Table 5. A total of 58 different varieties was being grown by the 149 growers visited.

Table 5. Number and Percent of 149 Peach Growers Having Ten or More Trees of Given Varieties, Ottawa County, July and August, 1952.

Variety	Number of Growers	Percent of Growers
Elberta	142	95.3
Golden Jubilee	114	76.5
Halehaven	111	74.5
South Haven	68	45.6
Red Haven	57	38.3
Rochester	35	23.5
Zarn	28	18.8
J. H. Hale	28	18.8
Fertile Hale	25	16.8
Hardie	18	12.1
Salberta	17	11.4
Mikado	17	11.4
Oriole	16	10.7
White Champion	12	8.1
Rio Oso Gem	12	8.1
Cumberland	11	7.4
Sunglo	9	6.0
Kalhaven	8	5.4
Dewey	8	5.4
Carmen	7	4.7
Mayflower	7	4.7
Lemon Free	7	4.7
Other[1/]	80	53.7

1/ Includes 36 varieties each of which was being grown by less than seven growers.

Size of Orchards

The 149 growers had a total of 231,520 peach trees, an average of 1,554 trees, or approximately 11 acres per grower.[1/] Table 6 shows the distribution of peach growers according to the size of orchards. About one-half of the growers visited in

Table 6. Distribution of 149 Peach Growers According to Number of Trees Grown, Ottawa County, July and August, 1952.

Number of Trees	Number of Growers	Percent of Growers	Number of Trees	Cumulative Percentage of Trees
100 to 500	40	26.9	12,814	5.5
501 to 1000	33	22.1	24,211	16.0
1001 to 1500	21	14.1	25,700	27.1
1501 to 2000	21	14.1	36,938	43.0
2001 to 2500	6	4.0	13,940	49.1
2501 to 3000	9	6.0	24,697	59.7
3001 to 3500	3	2.0	9,875	64.0
3501 to 4000	4	2.7	15,226	70.6
4001 to 4500	5	3.4	21,565	79.9
4501 to 5000	3	2.0	14,600	86.2
5000 and over	4	2.7	31,954	100.0
Total	149	100.0	231,520	100.0

the survey had 1000 or fewer trees and had only 16 percent of the total number of trees. Thus, one-half of the growers visited had 84 percent of the trees accounted for in the survey.

Tree Ages

An attempt was made to determine the ages of all peach trees by varieties. Few growers were able to give the exact ages because of replantings, the fact that some growers were operating orchards that had been partly planted by a former operator; and various other reasons. The information obtained in regard to tree ages indicated that more than one-third of the trees were more than ten years old and at least 20 percent were more than 15 years of age. Since yields per tree usually

1/ Assuming an average of 142 trees per acre.

declines after fifteen years, it appears as if at least one-fifth of the peach trees in Ottawa County are no longer in the maximum yield stage. This fact could have an important effect on the orchard yields of individual growers and consequently on the profitableness of the peach enterprise.

Future Trends in Tree Numbers and Varieties

All of the growers were asked their plans regarding the planting or removal of peach trees within the next five years. Seventy-seven growers did not plant any changes while 49 growers indicated that they planned to plant additional trees and 23 growers said that they planned to reduce their orchards within this period. Of the 49 growers planning to increase plantings, 29 had more than 1000 trees, and of those 23 planning to reduce plantings, 13 had 1000 or more trees. The estimated plantings amounted to about 34,000 trees and the estimated removals to about 14,000 trees. Only the information from growers who indicated that they would have a net change in the total number of trees or varieties grown were included in the above figures.

The estimated plantings and removal of peach trees by Ottawa County growers is presented in Table 7. Elberta was mentioned more often than any other variety by growers who intended to plant additional trees and also by those who intended to remove trees. The estimated plantings of Elberta trees were 3841 trees plus an unknown number included in mixtures, whereas the estimated removals were 9352 trees. This indicates that the Elberta variety will become less important in the future, a fact that will have an unknown effect upon marketing practices and problems in Ottawa County. Red Haven, Hale Haven and other early varieties were the next most important mentioned by those who intended to increase their peach acreage, and most of the remainder were undecided as to the varieties to be planted.

Even though 29 of the 49 growers planning to increase their peach acreage were those having more than 1000 trees, one-half of the net increase in tree numbers will be due to the plantings of growers having less than 1000 trees. This is due to the estimated 10,755 trees to be removed by the larger growers.

Table 7. Number of Trees to be Planted and Removed within the Next Five Years by 72 Peach Growers, by Variety, Ottawa County, July and August, 1952.

Variety	Plantings		Removals	
	Growers with less than 1001 trees	Growers with more than 1000 trees	Growers with less than 1001 trees	Growers with more than 1000 trees
Elberta	1177	2664	1752	7600
Elberta and early variety	1500	2006	-	-
Elberta and late variety	-	1120	-	-
Redhaven	600	100	-	-
South Haven	500	-	-	250
Halehaven	340	-	150	500
Mixed havens	605	560	-	-
Mikado	100	-	-	-
Fertile Hale	-	447	-	-
Early Red Giant	-	200	-	-
Shippers Red	-	100	-	-
Golden Jubilee	-	100	-	-
Hardie	-	-	300	-
Early varieties	400	-	-	-
Late varieties	-	1340	-	-
Unknown	4516	8543	-	-
Other[1/]	3550	3595	755	2405
Total	13,288	20,775	2,957	10,755

1/ Includes combinations of three or more varieties.

These figures indicate that the total number of peach trees in Ottawa County will increase by about 20,000 within the next five years. An important consideration for the future is the fact that many trees were severely injured during the winter of 1951 and almost all of the orchards have dead or dying trees as a result of this winter damage. The extent to which such trees are replaced will undoubtedly have considerable bearing upon the peach tree numbers in Ottawa County in the next five years.

Use of Land Formerly Devoted to Peaches

Each of the growers interviewed was asked to give the number of peach trees on the farm when he began operations as well as the number he currently was growing. This information indicates the number of growers having more, fewer or the same number of trees now compared to the beginning of their operations on the present farm. (Table 8)

Table 8. Number and Percent of Peach Growers Having More, Fewer or the Same Number of Trees in 1952 as Compared to the Beginning of Their Operations of the Farm, Ottawa County, July and August, 1952.

Number of Trees now Compared to Beginning of Operations	Number of Growers	Percent of Growers
More	68	45.6
Same	34	22.8
Fewer	46	30.9
No answer	1	0.7
Total	149	100.0

Table 9 shows the use of land formerly devoted to peaches by those 46 growers who have reduced their peach acreage since beginning operations.

Table 9. Use of Land Formerly Devoted to Peaches by Those Growers Having Fewer Trees Now Than at the Beginning of Their Operation of the Farm, 46 Growers, Ottawa County, July and August, 1952.

Use of Land Formerly Devoted to Peaches	Number of Growers	Percent of Growers
Grain Crops	16	34.8
General Farming	12	26.1
Left Idle	11	23.9
Sold	2	4.3
Clover and Alfalfa	1	2.2
No answer	4	8.7
Total	46	100.0

Length of Ownership or Operation

In order to determine the rate of turnover of peach orchards in Ottawa County, each grower was asked how long he had owned or operated the farm where he was currently producing peaches. It was found that 130 growers owned the entire farm, 12 were non-owners and seven growers were part owners. The length of operation in number of years is presented in Table 10.

Table 10. Length of Operation of Farms by 149 Peach Growers, Ottawa County, July and August, 1952.

Years Operated 1/	Number of Growers	Percent of Growers	Cumulative Percentage
0 - 5	28	19.0	19.0
6 - 10	28	19.0	37.8
11 - 15	18	12.2	50.0
16 - 20	7	4.7	54.7
21 - 25	8	5.4	60.1
26 - 30	11	7.4	67.6
31 - 35	15	10.1	77.7
36 - 40	13	8.8	86.5
41 - 45	7	4.7	91.2
46 - 50	3	2.0	93.2
51 - 55	3	2.0	95.3
56 - over	7	4.7	100.0
Total	148 2/	100.0	100.0

1/ Refers to number of years present operator has assumed responsibility for operation of the farm or number of years present operator has lived on farm in the case of lifetime residents.

2/ One grower did not answer.

One-half of the growers had operated their farms 15 years or less and 32.4 percent had operated or had lived on the farm more than 30 years. (Table 10). Only 37.8 percent of the growers had operated the farm 10 years or less which indicates relatively long time ownership or operation by the majority of growers interviewed.

Age of Growers and Plans for Transfer of Ownership

An important factor affecting the status of a specifalized business such as peach production is whether or not young people enter the business and intend to remain. A lack of interest among the young people was apparent since only a few growers who had sons of working age indicated that their sons intended to farm and in most cases had already chosen other occupations.

Each grower was questioned about his or the owner's plans for transferring ownership of the farm in the future. Only one-fourth of the owners had made any definite plans or arrangements for the future disposition of their farms. Sixty-six percent of the owners stated that the farms would remain in the family if at all possible, however.

The estimated ages of the growers showed that more than one-half were over 55 years old and only 15.4 percent were under 41 years of age (Table 11).

The facts indicate that there will probably be fewer commercial peach growers in Ottawa County. The production of peaches is a specialized business which requires an experienced operator to maintain a profitable enterprise. The apparent lack of young people in the peach business, the uncertainties of many of the growers regarding a future disposition of their farms, the large proportion of relatively small orchards, shifts to other crops and increasing non-farm employment of growers are all factors leading to the above conclusion. According to the Census of Agriculture, there were less than half as many farms with peach trees in 1950 than in 1930.

Importance of Peaches and Non-Farm Employment as a Source of Income

As mentioned previously, peaches have become less important as a source of farm income in Ottawa County during the past 15 years. Peaches have also become less important as a source of income to the 149 growers interviewed. Before World War II nearly 41 percent of the growers depended upon peaches for more than one-half of their total income while at the time of the survey, 27 percent of the growers earned more than one-half of their total income by growing peaches.

Table 11. Estimated Age Group Classification of 149 Peach Growers, Ottawa County, July and August, 1952.

Age Group	Number of Growers	Percent of Growers	Cumulative Percentage
20 - 25	1	0.7	0.7
26 - 30	3	2.0	2.7
31 - 35	8	5.4	8.1
36 - 40	11	7.4	15.4
41 - 45	18	12.1	27.5
46 - 50	11	7.4	34.9
51 - 55	22	14.7	49.7
56 - 60	12	8.1	57.7
61 - 65	32	21.4	79.2
66 - 70	18	12.1	91.3
71 - 75	10	6.7	98.0
76 - 80	3	2.0	100.0
Total	149	100.0	100.0

1/ The age of either the owner or operator was used depending upon who assumed the responsibility for producing and marketing the peaches.

Part of this decline in the importance of peaches in the farm enterprises has been due to shifts to other crops or livestock, but another important factor has been the favorable opportunities for non-farm employment. These opportunities have undoubtedly contributed to the decline of the peach industry in Ottawa County. Nearly 54 percent of the growers visited in the survey had jobs other than farming, and 35.6 percent of these had full time jobs. Nearly 66 percent of the growers of 1000 or less trees had jobs other than farming while 46 percent of the growers of more than 1000 trees had other jobs.

Marketing Practices and Problems

An attempt was made to determine the outlets used by peach growers in Ottawa County for their crop, how prices were determined for those growers not selling directly to local packing sheds, retailers, or wholesalers, the types of containers used, and growers' opinions concerning marketing problems.

Marketing Methods

Each grower was asked how he had marketed the previous year's peach crop. The outlets used by the growers to market their 1951 crop are shown in Table 12.

Table 12. Number and Percent of Growers Marketing Their 1951 Peach Crop Through Various Outlets, 148[1] Growers, Ottawa County, July and August, 1952.

Outlet Used For Crop[2]	Number of Growers	Percent of Growers
Roadside market and truckers[3]	45	30.3
Roadside market	31	20.9
Roadside market and local packing shed	22	14.9
Local packing shed	17	11.5
Trucker	10	6.8
Roadside market and retailer	5	3.4
Roadside market and wholesaler	5	3.4
Retailer	4	2.7
Other[4]	9	6.1
Total	148	100.0

1/ One grower had no marketable crop in 1951.
2/ Ninety-five percent or more of total crop.
3/ Refers to truck-buyers who purchased fruit at the farm.
4/ Includes those who marketed through other combinations of the given outlets.

Almost 73 percent of the growers marketed part or all of their crop through a roadside market while 37.2 percent sold to a trucker and 26.4 percent marketed through a local packing shed. A local packing shed refers to the cooperative private packing shed in the county.

Table 13. Outlet Used by 148 Peach Growers to Market Most of Their 1951 Crop, by Size of Grower, Ottawa County, July and August, 1952.

Size of Grower by number of trees	Outlets Used						
	Roadside Market	Packing Shed	Trucker	Retailer	Wholesaler	Other 1/	Total
	(Percent of Growers)						
100 - 500	70.0	10.0	7.5	10.0	-	2.5	100.0
501 - 1000	34.3	15.6	31.3	-	-	18.8	100.0
1001 - 1500	28.6	33.3	19.0	4.8	4.8	9.5	100.0
1501 - 2000	14.3	38.6	33.3	-	4.8	19.0	100.0
2001 - 3000	33.3	26.7	33.3	-	-	6.7	100.0
3001 - over	31.5	15.8	21.1	5.3	10.5	15.8	100.0
Total	39.9	19.6	22.3	4.0	2.7	11.5	100.0

1/ Includes those who sold an equal proportion through two or more of the given outlets.

The single outlet used by growers to market most of the peach crop in 1951 is given in Table 13 according to the size of the grower. The growers having less than 1000 trees used the roadside market to a greater extent than those growers having more than 1000 trees, whereas the reverse was true in the case of a local packing shed and a trucker.

Of those growers having 1000 or fewer trees, 54.2 percent sold most of their crop through a roadside market and 12.5 percent marketed mostly through a local packing shed. Of those growers having more than 1000 trees, the same proportion, 26.3 percent, sold most of their 1951 crop through a roadside market, a local packing shed, and a trucker.

The information in Tables 12 and 13 indicates that the roadside market was the most important marketing outlet used in Ottawa County in terms of the number of growers and the volume of fruit sold. Truckers and a local packing shed were the next most important marketing outlets. A relatively small proportion of the peach crop was sold directly to a retailer or wholesaler.

Since size of crop influences growers' marketing practices, the foregoing information would not necessarily describe marketing practices for all crop years. The relative importance of the various marketing outlets probably would not change from year to year, however, unless very large variations occurred in production. The total production of peaches in Ottawa County in 1951 is not known, but for the whole state the 1951 peach crop was only about three percent greater than the average production from 1940 to 1949.

Price Determination

Growers who sold peaches at roadside markets based their selling price upon local competition to a greater extent than on any other factor (Table 14).

Table 14. Factors Upon Which P ice was Based by Growers Who Sold Peaches at Roadside Markets in 1951, Ottawa County, July and August, 1952.

Price Determining Factors	Number of Growers	Percent of Growers
Local competition	60	51.7
Market report or newspaper	49	42.2
What traffic would bear	29	25.0
Truckers' price	10	8.6
City retail price	8	6.9
Price at local packing shed	3	2.6
Other	6	5.2
No answer	1	0.9
Total	116[1]/	1/

1/ Some growers mentioned more than one factor.

More than one-half of those growers who sold peaches at roadside markets based their selling prices wholly or partly on local competition while market reports or newspaper price quotations were the next most important factor.

Since almost 73 percent of the growers interviewed sold part or all of their 1951 crop through a roadside market, it is apparent that a high degree of competition exists in the county. Most of the roadside sales were made to tourists, according to the growers who sold at roadside. The fact that roadside operators tend to pick relatively ripe fruit which has to be moved in a short time, and the high degree of competition has undoubtedly created a favorable situation for truck buyers who come into the area when ripe fruit is on hand. This situation has probably had and will continue to have quite an influence upon prices received at roadside by growers especially if large unit sales continue to decline due to less home canning.

Containers Used

All but four growers were using splint or stave bushel baskets to market part or all of their peach crop, and the next most popular container was the four quart splint basket which was being used by 68 percent of the growers. Only seven growers were using containers other than the splint type, five of these were using some cardboard containers and two were using wooden crates. All of the growers who sold fruit to a local packing shed used the splint bushel basket to move peaches to the packing house. Most of the growers who used outlets in addition to a local packing house were packing peaches in various sizes of splint containers, and, as mentioned before, a few were using types other than splint.

All of the growers were asked whether or not they believed that the containers they were presently using were fully satisfactory for marketing peaches. Thirty-two growers did not believe that the containers which they were using were fully satisfactory and gave the recommendations presented in Table 15.

Table 15. Recommendations Made by 32 Peach Growers Not Fully Satisfied with Present Containers as to What Types of Containers Would be More Satisfactory, Ottawa County, July and August, 1952.

Recommended Types	Number of Growers	Percent of Growers
Paper or cardboard	18	56.3
A less expensive container	5 1/	15.6
Wooden box	3 2/	9.4
A more durable container	2	6.3
A more decorative container	1	3.1
A round and shallow type	1	3.1
Wooden or cardboard box	1	3.1
Don't know	1	3.1
Total	32	100.0

1/ One grower mentioned that it should also be easier to store.

2/ One grower specified a wirebound box.

Main Marketing Problems

Sixty percent of the growers interviewed believed that a major marketing problem existed in Ottawa County. The main marketing problems encountered in the opinion of these 90 growers, are presented in Table 16.

Production Practices and Problems

Information was obtained concerning cultural practices followed by the peach growers in Ottawa County, and what they considered to be the main problems in producing peaches. It was believed that this information would reveal some of the causes for the lack of vigor that was apparent in peach orchards in the county, and thus explain some of the reasons for declining tree numbers and increasing marketing problems.

Table 16. Problems Encountered in Marketing Peaches by 90 Growers*, Ottawa County, July and August, 1952.

Problems Encountered	Number of Growers	Percent of Growers
Price cutting by other growers	16[1]/	17.8
Truckers take advantage when ripe fruit is on hand	10	11.1
Cannot obtain fair price	10	11.1
Oversupply of fruit in area	9[2]/	10.0
Low quality, low price on market	8	8.9
Competition of fruit from other states	8	8.9
Can't move entire crop satisfactorily	8[3]/	8.9
Poor price from packing shed	7	7.8
Lack of competitive outlets	4	4.4
Lack of home canning has cut demand	3	3.3
Lack of grade enforcement in area	3	3.3
Packing shed takes peaches too green	3	3.3
No outlet for small sizes	3	3.3
Unable to hold ripe fruit until it moves	3	3.3
Obtaining size and ripeness to satisfy entire trade	3	3.3
Delay in receiving money from packing shed	2	2.2
Other	10	11.1
Total	90[4]/	4/

* Fifty-six growers said that no problems existed, and three growers did not answer.

1/ Four specified part-time growers who cut price to move whatever possible.

2/ One grower referred especially to Elberta season.

3/ Two growers referred to Elberta season.

4/ Some growers mentioned more than one problem.

Frost Damage

Of the 149 peach growers interviewed, 59 indicated that slight spring frost damage was sometimes a problem but only 16 stated that severe spring frost damage ever occurred. Only eight of these 59 growers who indicated that slight spring frost damage sometimes occurred were of the opinion that it occurred as often as once in five years, while most of the remaining 51 growers said that slight damage occurred very seldom or once every ten to 15 years. Of those 16 growers who indicated that severe spring frost damage was sometimes a problem, only four believed that it occurred as often as once in five years.

It appears as if spring frosts are not a major production problem in Ottawa County and to that extent this area provides a very favorable site for producing peaches in Ohio.

Planting Distances

The most common planting distances used in Ottawa County peach orchards were 16 by 16 and 18 by 18 feet (Table 17). About one-third of the growers had planted trees from 14 by 14 to 17 by 17 feet while the rest of the growers used greater distances. Several growers indicated that they were going to use greater distances between the trees and rows when making future plantings.

Table 17. Number and Percent of 145[1/] Ottawa County Peach Growers Using Various Planting Distances in Peach Orchards[2/], Ottawa County, July and August, 1952.

Planting Distance In Feet[3/]	Number of Growers	Percent of Growers
14 by 14	2	1.4
16 by 16	30	20.7
16½ by 16½	11	7.6
17 by 17	4	2.8
16 by 18	16	11.0
16½ by 18	2	1.4
17½ by 17½	4	2.8
18 by 18	36	24.7
18 by 20	9	6.2
19½ by 19½	3	2.1
20 by 20	15	10.3
Other	13[4/]	9.0
Total	145	100.0

1/ Four growers did not answer.
2/ Distances used in most recent plantings were used.
3/ First figure applies to distance between trees in the row and the second figure applies to distance between rows.
4/ Each of the following was mentioned by one grower: 15 by 15, 14 by 16, 12 by 18, 14 by 18, 16½ by 18½, 16 by 20, 18 by 15, 17 by 18, 17 by 19, 18½ by 18½, 19 by 19, 22 by 22, 20 by 24.
Note average planting distance was 17.3 by 17.8

Use of Irrigation

Seven growers were irrigating their peach trees, two of whom were using sprayers to irrigate less than 600 trees. All but one grower believed that irrigation had been of value. Two growers estimated that irrigation had increased their peach crop from 50 to 75 percent and another estimated a 10 to 15 percent increase. The others believed that irrigation had either increased the size of the fruit or had benefited the trees.

Of those 142 growers not irrigating, more than one-half said that irrigation would be of value in most years which indicates that inadequate moisture is a problem in the majority of peach orchards in Ottawa County.

Use of Cover Crops

Cover crops were being grown in peach orchards by 77 growers. The remaining 72 growers clean cultivated their orchards but used no cover crop. Fifty growers were using an annual cover crop while 27 were growing a cover crop every other year or less often. About 85 percent were growing rye or grass or both for a cover crop, and the remainder were using another grain crop or clover.

Of those growers having 1000 or less trees, 48 percent were using a cover crop compared with 57 percent of the growers having more than 1000 trees. The fact that 48 percent of the growers were not growing cover crops in their peach orchards could be one of the principal causes for many of the problems encountered in the production of peaches in Ottawa County.

Fertilization Programs

One-third of the growers did not use fertilizer or manure in their orchards. About two-thirds of the growers were following a fertilization schedule in their peach orchards and most of them were applying the fertilizer or manure in the spring. All but 10 made regular annual applications. Seven of the growers were broadcasting or drilling the fertilizer throughout the orchards while the others

applied it on the foliage or around the base of the trees. Most of the growers used a complete fertilizer while manure and a nitrate followed in importance. Three growers were applying a nitrate to the trees by means of a foliage spray.

Seventy percent of the growers with more than 1000 trees were using a fertilizer or manure in their orchards compared with 62 percent of growers with 1000 or less trees.

As pointed out previously, much of the soil in Ottawa County peach orchards has been in production continuously for a long period of time which could result in poor soil structure if recommended soil management practices were not followed. The fact that almost one-half of the growers did not use cover crops and one-third did not use fertilizer or manure together with the opinion that more moisture was needed in most years seems to indicate that inadequate soil structure, fertility, and moisture holding capacity are partly responsible for the problems encountered in peach production.

Main Production Problems

Insect control was asserted to be the greatest problem encountered in the production of peaches by the 102 growers who indicated that major production problems existed. (Table 18)

Table 18. Main Problems Encountered in the Production of Peaches, Opinions of 102 Growers, Ottawa County, July and August, 1952.

Main Problem	Number of Growers	Percent of Growers
Peach borers	44	43.1
Oriental fruit moth	11	10.8
Insect control	10	9.8
Curculio	7	6.9
Peach scale	2	2.0
Brown rot	6	5.9
Peach canker	3	2.9
Disease control	2	2.0
Insect and disease control	7	6.9
Scarcity and cost of labor	12	11.8
Winter damage to trees	10	9.8
Obtaining large sized fruit	4	3.9
Lack of moisture	3	2.9
Other	14	13.7

A total of 74 growers indicated that insects were a major problem in the production of peaches; 44 of whom specified peach borers.

The scarcity and high cost of labor was considered the most important problem encountered in the production of peaches other than insect and disease control.

Attitude Towards Advertising

All growers were asked whether or not they favored a grower financed advertising program for Ottawa County peaches. The results are presented in Table 19.

Table 19. Attitudes of 149 Peach Growers Towards Grower Financed Advertising of Peaches, Ottawa County, July and August, 1952.

Attitude Towards Advertising	Number of Growers	Percent of Growers
Favorable	84[1/]	56.4
Unfavorable	34[2/]	22.8
Might be of value	8	5.4
Doubt its value	10	6.7
Don't know or no opinion	13	8.7
Total	149	100.0

1/ One was favorable if the advertising was fair to all growers.

2/ Two growers preferred to do own advertising, two growers believed that they were too small to receive benefit, two growers believed advertising to be too costly, and two growers believed the benefits would be unfairly distributed.